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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/625,778
Filing Date: July 24, 2003
Appellant(s): MORIMOTO, YOSHINARI

Jesse O. Collier
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9 April 2007 appealing from the Office action mailed 31 August 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. 6,454,390	Takahashi et al.	9-2002
U.S. 6,215,562	Michel et al.	4-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5, 6 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (U.S. 6,454,390 B1) in view of Michel (U.S. 6,215,562).

With regards to claims 1 and 23, Takahashi et al. discloses an ink jet printer, comprising:

a printing unit having a carriage and a print head (fig. 5) in which a plurality of ink jet nozzles are arranged in plural columns (fig. 6b), the printing unit printing on a printing medium while reciprocating the print head by the carriage for go-printing and return-printing (column 39, lines 5-9);

a sensor (fig. 8) disposed on the carriage (column 20, lines 58-60) and having a light-emitting portion (31) for emitting light toward the printing medium and a light-receiving portion (32) for receiving reflected light from the printing medium;

a test pattern printing control unit (fig. 9, elements 100, 150) that causes the printing unit to print a test pattern in which vertical ruled lines are arranged with a prescribed pitch (fig. 37);

a plural patterns printing instructing unit that causes the printing unit to print a plurality of test patterns while changing a test pattern printing interval of the return-printing with respect to the go-printing in plural stages (controller 100, fig. 37, column 39, lines 5-9);

a best pattern detecting unit for scanning-in the printed test patterns with the sensor and for automatically selecting a best test pattern from the scanned-in test patterns (30); and

a best pattern printing instructing unit that causes the printing unit to print information indicating an image of the selected best test pattern on the printing medium (controller, column 41, lines 45-50).

With regards to claim 3, the best pattern printing instructing unit causes the printing unit to print information indicating a test pattern printing interval that produces the selected best test pattern as information indicating the image of the selected best test pattern (column 41, lines 45-50).

With regards to claim 5, the sensor detects at least one of a front end portion, a rear end portion, and a width portion of the printing medium (since sensor is mounted on carriage it may detect any portion of paper, further as sensor scans, it detects various portions of the paper).

With regards to claim 6, Takashi discloses:

a detection result judging unit for judging whether a detection made by the best pattern detecting unit is appropriate (controller 100, column 17, lines 14-32 and column 33, lines 28-36); and

a re-detection executing unit that causes the printing unit to print the plurality of test patterns again while changing a printing condition and causes the sensor to scan the printed test patterns again when the detection result judging unit judges that the detection made by the best pattern detecting unit is not appropriate (controller 100, column 33, lines 38-43, column 38, lines 54-62).

Takahashi prints a confirmation pattern to confirm the result of dot alignment (column 41, lines 45-50, "A ruler mark pattern, etc. easy to be recognized by the user is used for the confirmation pattern").

Takahashi discloses everything claimed with the exception of expressly disclosing reprinting the selected best test pattern from the scanned-in test patterns on the printing medium at the test pattern printing interval that produces the selected best test pattern (claim 1), or printing information indicating an image of the selected best test pattern on the printing medium, wherein the image printed on the printing medium includes a confirmation pattern that corresponds to the selected best test pattern and its number of shift dots (claim 23).

Michel et al. discloses reprinting a selected best test pattern after a user makes a selection such that the reprinted pattern is formed in a center amongst other patterns (column 7, lines 3-8 and 39-40). Michel et al. also discloses reprinting patterns if a selected pattern is out of range (column 7, lines 31-34).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Takahashi so as to reprint the selected test pattern as suggested by Michel et al. for the purpose of enabling errors to be readily detected and corrected by employing an iterative process with coarse and fine iterations (column 3, lines 31-33 and 42-45).

(10) Response to Argument

A.

1. Neither Takahashi nor Michel teaches or suggests all of the claim limitations as set forth in claims 1 and 23.

In printing, it is very common to use test patterns to perform corrections. Typically, a series of patterns are printed, with values which change slightly between the patterns, thus producing differences in image quality on the page. A user, or an automated sensor, will select the pattern, among the plurality of slightly varying patterns, that produces the best print quality. The printer then knows the values used to print this particular pattern and employs these values during regular printing operations to produce a better quality printout.

Michel prints a series of patterns and then the user selects the best one. The patterns are then reprinted, with the selected pattern as the central pattern, such that the other patterns printed vary slightly around this selected pattern.

The user then makes a second selection. If the user selects the middle pattern, the pattern is effectively selected twice, once in the initial printing, and again after the selected pattern is made the middle pattern. After the pattern is selected twice, the pattern is confirmed and used for regular printing. If the central pattern is not selected the second time, the process continues until a first pattern is selected, made the central pattern, and then this central pattern is selected again.

Appellant argues that Michel clearly distinguishes between the selected patch, which is simply one of the patches selected to arrive at the best patch, and the best patch.

The selected patch referred to by appellant is a selection of a patch, from a series of printed patches, which produces the desired print quality.

The best patch referred to by appellant is the patch which is finally used to recalibrate the printer.

However, it is the examiner's opinion that any pattern which is selected from a group of patterns constitutes a "best pattern". Each time a series of patterns is printed, the selected one is the best pattern.

There is nothing in the claim that requires the best pattern to be the pattern which is actually used to implement the correction of the printer.

Accordingly appellant's argument that the selected patch is reprinted, and not the best patch, is not persuasive.

Appellant argues that Michel does not print on the same printing medium. Appellant then concludes that “both Takahashi and Michel fail to disclose reprinting the best patch on the same printing medium”.

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Takahashi discloses printing a confirmation pattern on the same page as the test pattern.

Takahashi states that: “In other words, printing patterns of two types of an adjustment pattern measuring density for adjusting and a confirmation pattern for confirming an adjustment are printed on a printing medium (three types if a type at a time of a sensor calibration is added)” (column 41, lines 50-54).

Thus, in the combination, the reprinting is conducted on the same page as the test pattern was initially reprinted. The reason that Michel prints on a separate page may have more to do with the size of the test pattern printed by Michel than anything else. Takahashi makes it clear that at least three separate patterns can be printed on the same page.

Furthermore, it is obvious to print patterns on the same page to conserve paper.

2. The Final Rejection has failed to identify a proper motivation for combining the alleged teachings of Takahashi and Michel

Appellant argues that if Takahashi were modified by Michel, it would not print the best test pattern. However, as discussed above, any pattern selected from a group of patterns is a best test pattern.

Appellant argues that the skilled artisan would recognize that in order to achieve the result cited as the examiner as the motivation, the selected pattern must be reprinted on a separate sheet. Nowhere is it stated by Michel that the patterns must be printed on separate sheets. Further, the skilled artisan would recognize that printing on a single sheet, or a plurality of sheets, is irrelevant to the primary teachings of Michel.

Appellant has not referred to any portions of the Michel reference, or provided any sort of reasoning as to why the combination must print the pattern on separate sheets of paper. Appellant's argument is merely an unsupported statement.

One of ordinary skill in the art at the time of the invention would have recognized that Takahashi prints patterns, at least up to three patterns, on a single sheet of paper. Thus to combine Michel commensurate with the teachings of Takahashi requires printing the patterns on a single sheet of paper. One of ordinary skill in the art at the time of the invention would not have been motivated to print on separate sheets of paper, since this would require more significant modifications to the device, since the device must now feed multiple sheets of paper and sense marks on multiple sheets of paper, and this would unnecessarily waste excess paper.

For all of the above reasons, one of ordinary skill in the art would have recognized that the combination prints the claimed test patterns on a single sheet of paper, or would have found it obvious to print the patterns on a single sheet of paper, as claimed.

Appellant argues that providing the invention of Michel in Takahashi provides no benefit over Takahashi alone. Appellant states that Takahashi is perfectly capable of determining a best patch by printing the test patches only once.

However, incorporating the iterative process of Michel into the invention of Takahashi enables the errors to be more readily detected and corrected by ensuring that the correct test pattern is selected.

It is noted that the appellant has presented no arguments against any of the teachings of Takahashi and that the only difference between Takahashi and the claimed invention is the reprinting of the selected best pattern.

Here, as opposed to the initial printing of the test pattern, which is used to control operation of the device, the reprinting of the selected best test pattern does not "define either new features of structure or new relations of printed matter to structure, or both", *Ex parte Gwinn*, 112 USPQ 439 (Bd. App. 1955). Also, in *In re Hansen*, 69 USPQ 332, the court stated that "So far as we are aware, no patent has ever been granted upon a structure wherein the sole distinction over the art consisted of printed matter". Since the reprinting of the pattern is the only difference between the Takahashi reference and the claimed invention, such reprinting of the pattern not affecting the structure of the device, and being the *sole* distinction, the rejection should be maintained.

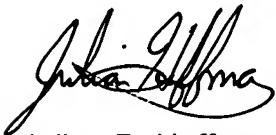
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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Julian D. Huffman", with a stylized, cursive script.

Julian D. Huffman

Primary Examiner

Conferees:

A handwritten signature in black ink, appearing to read "David Blum", with a stylized, cursive script.

David Blum

A handwritten signature in black ink, appearing to read "Stephen Meier", with a stylized, cursive script.

Stephen Meier